

Amendment to the Claims:

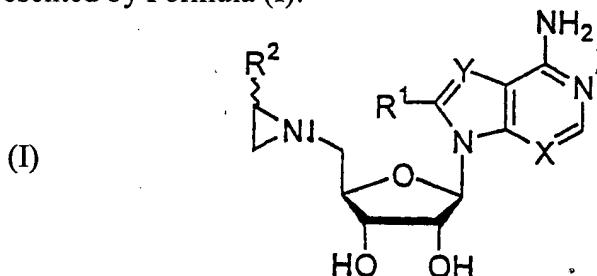
Please amend the claims as follows.

Please cancel claim 20, without prejudice.

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A compound comprising a structure Aziridine derivative represented by Formula (I):



wherein X is N or CH, Y is N or  $-CR^3$ ,  $R^1$  and  $R^3$  independently from each other are H,  $^3H$ ,  $-NH(CH_2)_nNHR^4$  or  $-NH(C_2H_5O)_nC_2H_5NHR^4$ , with  $R^4$  being selected from the group consisting of fluorophores, affinity tags, crosslinking agents, chromophors, proteins, peptides, amino acids, which may optionally be modified amino acids, nucleotides, nucleosides, nucleic acids, carbohydrates, lipids, PEG, transfection reagents, beads and intercalating agents, and n being an integer from 1 to 250 [[1-5000]], and  $R^2$  is selected from H,  $^3H$ ,  $-N(CH_2)_nNHR^4$ ,  $-NH(C_2H_5O)_nC_2H_5NHR^4$ , wherein  $R^4$  and n are as defined above, or  $R^2$  is  $-CH_2CH(COOH)(NH_2)$  or an electron withdrawing group.

Claim 2 (currently amended): The compound Aziridine derivative of claim 1, wherein X and Y are both N.

Claim 3 (currently amended): The compound Aziridine derivative of claim 1, wherein only one of  $R^1$ ,  $R^2$  and  $R^3$  is  $-N(CH_2)_nNHR^4$ ,  $-NH(C_2H_5O)_nC_2H_5NHR^4$ , the other(s) being H.

Claim 4 (currently amended): The compound Aziridine derivative of claim 1, wherein said fluorophore is selected from BODIPY, coumarin, dansyl, fluorescein, mansyl, pyrene, rhodamine, Texas red, TNS, the cyanine fluorophores Cy2, Cy3, Cy3.5, Cy5, Cy5.5, and Cy7, and derivatives thereof.

Claim 5 (currently amended): The compound Aziridine derivative of claim 1, wherein said affinity tag comprises [[is]] a peptide tag, biotin, digoxigenin or dinitrophenol.

Claim 6 (currently amended): The compound Aziridine derivative of claim 5, wherein said peptide tag comprises [[is]] his-tag or any tag with metal chelating properties which can be used in IMAC, strep-tag, flag-tag, c-myc-tag, epitopes or glutathione.

Claim 7 (currently amended): The compound Aziridine derivative of claim 1, wherein said crosslinking agent comprises [[is]] maleimide, iodoacetamide, a derivative thereof or an aldehyde derivative, or a photocrosslinking agent.

Claim 8 (currently amended): The compound Aziridine derivative of claim 7, wherein said photocrosslinking agent comprises [[is]] an arylazide, a diazo compound or a benzophenone compound.

Claim 9 (currently amended): A complex comprising a compound as set forth in claim 1 of the compound of any one of claims 1 to 8 and a methyltransferase which is capable of using normally uses S-adenosyl-L-methionine S-adenosyl-L-methionine (SAM) as a co-factor.

Claim 10 (currently amended): The complex of claim 9, wherein said methyltransferase normally transfers [[the]] a methyl group of S-adenosyl-L-methionine (SAM) [[SAM]] onto a nucleic acid molecule, a polypeptide, a protein, an enzyme or a small molecule.

Claim 11 (currently amended): The complex of claim 10, wherein said methyltransferase methylates DNA or RNA.

Claim 12 (original): The complex of claim 11, wherein said methyltransferase is part of a restriction modification system of a bacterium.

Claim 13 (original): The complex of claim 10, wherein said methyltransferase methylates proteins at distinct amino acids.

Claim 14 (currently amended): The complex of claim 12, wherein the methyltransferase is ~~a selected from the DNA methyltransferase selected from the group consisting of methyltransferases M. Taq1 and M. Hha1.~~

Claim 15 (currently amended): A kit comprising the compound of ~~any one of~~ claim 1 [[to 8]].  
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*Cont'd*

Claim 16 (currently amended): The kit of claim 15 further comprising a methyltransferase ~~which is capable of using S-adenosyl-L-methionine (SAM) as a co-factor as defined in any one of claims 9 to 14.~~

Claim 17 (currently amended): A kit comprising [[the]] ~~a complex of any one of claims 9 to 14 comprising a compound as set forth in claim 1 and a methyltransferase which is capable of using S-adenosyl-L-methionine (SAM) as a co-factor.~~

Claim 18 (currently amended): A pharmaceutical composition comprising the compound of ~~any one of claims~~ claim 1 [[to 8]] or the complex of ~~claim any one of claims 9 to 14 and optionally a pharmaceutically acceptable carrier.~~

Claim 19 (currently amended): A diagnostic composition comprising the compound of ~~any one of claims~~ claim 1 [[to 8]] or the complex of claim ~~any one of claims~~ 9 to 14.

Claim 20 (canceled)

Claim 21 (currently amended): The method [[use]] of claim 31 [[20]], wherein the modification of the target molecule is achieved by using the compound of claim 1 ~~any of the claims 1 to 8~~ as a cofactor of a methyltransferase which transfers the compound or part of the compound onto the target molecule.

Claim 22 (currently amended): The method [[use]] of claim 31 [[20 or 21]], wherein the target molecule comprises [[is]] a nucleic acid molecule, a polypeptide, a synthetic polymer or a small molecule.

Claim 23 (currently amended): The method [[use]] of claim 22, wherein the nucleic acid molecule comprises [[is]] DNA or RNA or hybrids thereof.

Claim 24 (currently amended): The method [[use]] of claim 22, wherein the small molecule comprises [[is]] a lipid.

Claim 25 (currently amended): The method [[use]] of claim 22, wherein the polypeptide is a protein or a fusion protein comprising a methylation site.

Claim 26 (currently amended): The method [[use]] of ~~any of claims~~ claim 21 [[to 25]], wherein the methyltransferase comprises [[is]] a methyltransferase that is capable of using S-adenosyl-L-methionine (SAM) as a co-factor defined in any one of claims 9 to 14.

Claim 27 (currently amended): A method for the preparation of a modified target molecule comprising the following steps:

(a) providing a compound as set forth in claim 1;  
(b) providing a target molecule; and  
(c) incubating ~~incubation~~ of the target molecule with the compound ~~of any one of~~ claims 1 to 8 in the presence of a methyltransferase which is capable of using the compound as a cofactor [[and]] under conditions which allow the transfer of the compound or part of it onto the target molecule.

Claim 28 (currently amended): The method of claim 27, wherein the methyltransferase comprises [[is]] a methyltransferase that uses S-adenosyl-L-methionine (SAM) ~~as a co-factor defined in any one of claims 9 to 14.~~

Claim 29 (currently amended): The method of claim 27 [[or 28]], wherein the target molecule comprises a nucleic acid molecule, a DNA, an RNA, an RNA/DNA hybrid, a polypeptide, a fusion protein, a synthetic polymer, a small molecule or a lipid ~~is as defined in any one of claims 22 to 25.~~

Claim 30 (currently amended): A modified [[Modified]] target molecule made obtainable by the method of [[any of]] claim claims 27 [[to 29]].

Claim 31 (new): A method for modifying a target molecule comprising the following steps:

- (a) providing a compound as set forth in claim 1;
- (b) providing a target molecule; and
- (c) contacting the target molecule with the composition such that the target molecule is modified by the composition.

Claim 32 (new): The pharmaceutical composition of claim 18, further comprising a pharmaceutically acceptable carrier.

Claim 33 (new): The compound of claim 1, wherein X is N.

Claim 34 (new): The compound of claim 1, wherein X is CH.

Claim 35 (new): The compound of claim 1, wherein Y is N.

Claim 36 (new): The compound of claim 1, wherein Y is -CR<sup>3</sup>.

Claim 37 (new): The compound of claim 1, wherein R<sup>2</sup> is <sup>3</sup>H.

Claim 38 (new): The compound of claim 1, wherein R<sup>2</sup> is -N(CH<sub>2</sub>)<sub>n</sub>NHR<sup>4</sup>.

Claim 39 (new): The compound of claim 1, wherein R<sup>2</sup> is  
-NH(C<sub>2</sub>H<sub>5</sub>O)<sub>n</sub>C<sub>2</sub>H<sub>5</sub>NHR<sup>4</sup>.

Claim 40 (new): The compound of claim 1, wherein n is 1, 2, 3, 4 or 5.

Claim 41 (new): The compound of claim 1, wherein n is an integer between 1 to

20.

Claim 42 (new): The compound of claim 1, wherein X is N, Y is N, R<sup>2</sup> is H and n  
is 1 to 4.

Claim 43 (new): The compound of claim 1, wherein R<sup>2</sup> comprises an electron-  
withdrawing group.

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